

Valvcon™ universal ADC-series sealed lead acid back-up battery upgrade kits

Installation, maintenance and
operating instructions

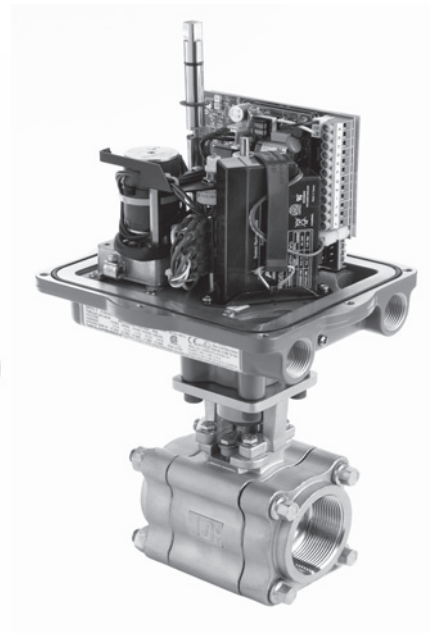
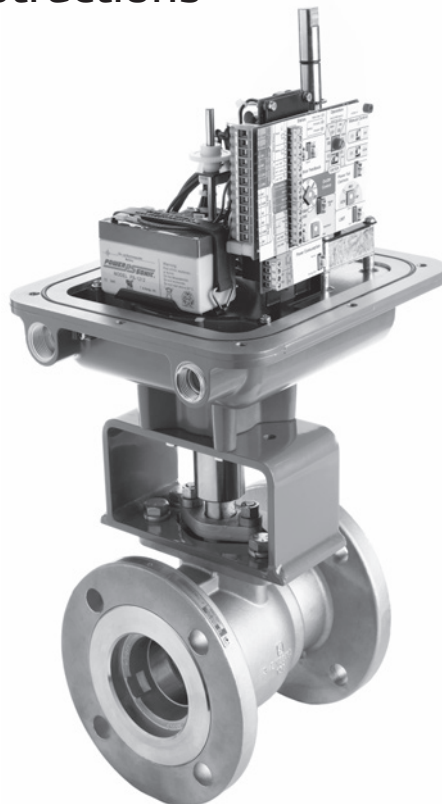


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READ THESE INSTRUCTIONS FIRST! These instructions provide information about safe handling and operation of the valve. If you require additional assistance, please contact the manufacturer or manufacturer's representative.	SAVE THESE INSTRUCTIONS! Addresses and phone numbers are printed on the back cover.
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1. GENERAL

1.1 SCOPE OF THE MANUAL

This instruction manual contains important information regarding the sequential steps required to add a back-up battery to a Universal ADC or LADC Series electric actuator. Please read these instructions carefully and save them for future reference.

1.2 SAFETY PRECAUTIONS

WARNING

DANGEROUS VOLTAGES ARE PRESENT INSIDE THE ACTUATOR COVER UNLESS THE POWER SUPPLY TO THE ACTUATOR HAS BEEN SHUT OFF OR DISCONNECTED. USE EXTREME CAUTION WHENEVER WORKING ON THE ACTUATOR WITH THE COVER REMOVED.

WARNING

WHEN REMOVING DC SUPPLY POWER, THE POSITIVE LEAD MUST BE DISCONNECTED FIRST; FAILURE TO HEED THIS WARNING MAY RESULT IN A BLOWN FUSE IN THE PROTECTION CIRCUIT ON THE BOARD.

WARNING

WHENEVER WORKING INSIDE THE ACTUATOR BE SURE TO FOLLOW ALL GUIDELINES, AND HEED ALL WARNINGS IN THIS OPTION KIT MANUAL. AS WELL AS TO READ AND FOLLOW THE INSTRUCTIONS SUPPLIED WITH THE ORIGINAL PRODUCT CAREFULLY AND HEED ANY ADDITIONAL WARNINGS.

WARNING

WHEN BATTERY IS CONNECTED TO BOARD, THE UNIT MAY DRIVE! BEWARE OF MOVEMENT OF THE FINAL DRIVE ELEMENT AND ANY LINKAGE BETWEEN IT AND THE ACTUATOR!

KEEP HANDS, OTHER PARTS OF THE BODY, TOOLS AND OTHER OBJECTS OUT OF THE WAY OF MOVING PARTS. FAILURE TO DO THIS MAY RESULT IN DAMAGE OR PERSONAL INJURY!

2. PARTS VERIFICATION AND INSTALLATION

2.1 ADC-SERIES PARTS VERIFICATION



Figure 1.

Table 1 - VCK00010 ADC (150-600)			
Item #	Parts #	Description	QTY
1	VC001032	Screw, #6-32x3/8", Phillips, Self-tapping	2
2	VC001035	Label, "Battery Warning"	2
3	VC001572	Battery, ADC	1
4	VCM00003	Bracket, Battery Holder	1
5	VCM00038	Battery Hold-Down Strap	1
6	VCA00019	Battery Adapter Cable, 2-Pin to 3-Pin	1

ADC-SERIES INSTALLATION

1. Locate the replacement VCK00010 upgrade kit for an ADC (if installing VCK00011 for LADC, refer to LADC section of this manual).
2. Verify parts received to the parts list and photo above.
3. Inspect all parts and hardware to be certain that they are free of damage that may have occurred in shipping.
4. Collect the tools required, refer to the **Table 2**.

Table 2 - Tools Required

5 mm Hex wrench (ADC-Series)	9/64 inch Hex wrench
#1 Phillips screwdriver	Small Flat Blade Screwdriver
1/16 inch Hex wrench	#2 Phillips screwdriver
6 mm Hex wrench (LADC-Series)	

Step by step instructions for the addition of a battery to a Universal ADC-Series actuator:

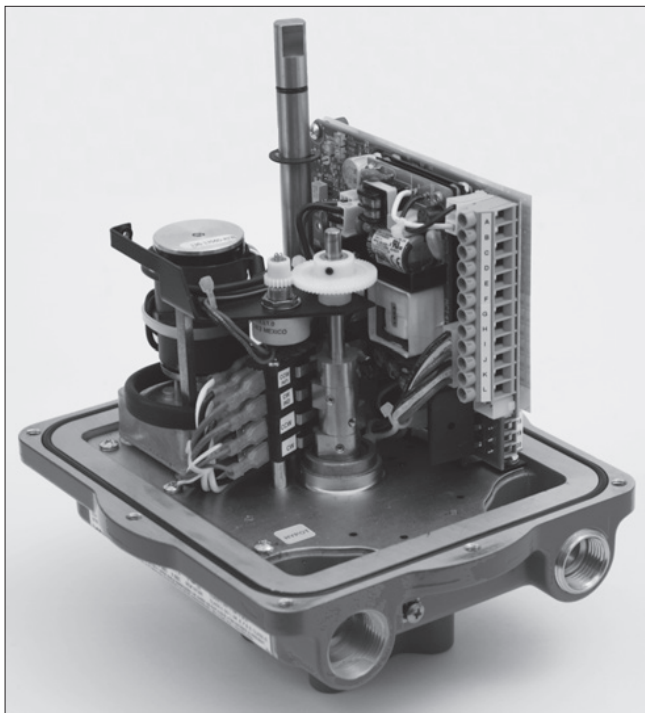


Figure 2.

Remove the actuator cover, using a 5 mm hex wrench to loosen the cover screws (note that the cover retains the screws; they do not need to be completely removed from the cover). The actuator will resemble **Figure 2** above.

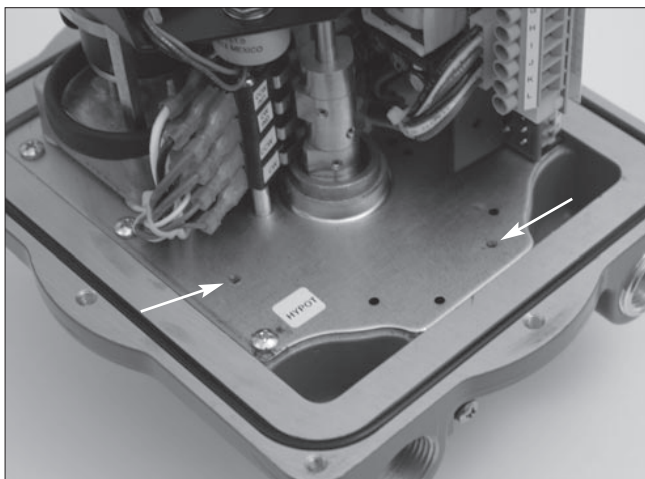


Figure 3.

Locate the bracket mounting holes on the motor support plate (see **Figure 3**).

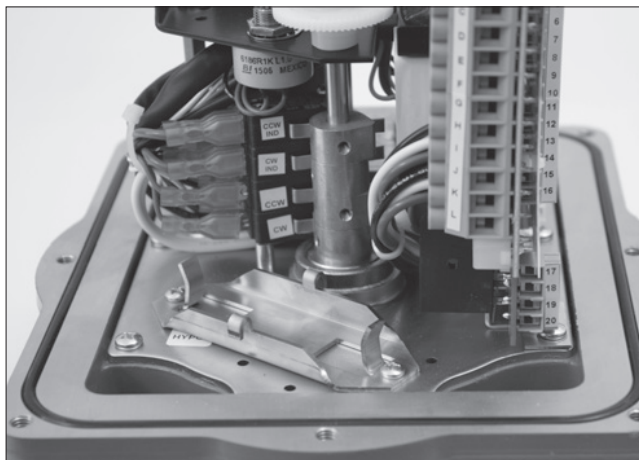


Figure 4. Figure 4

Using the supplied 6-32x3/8" screws, install the bracket for the ADC as shown.

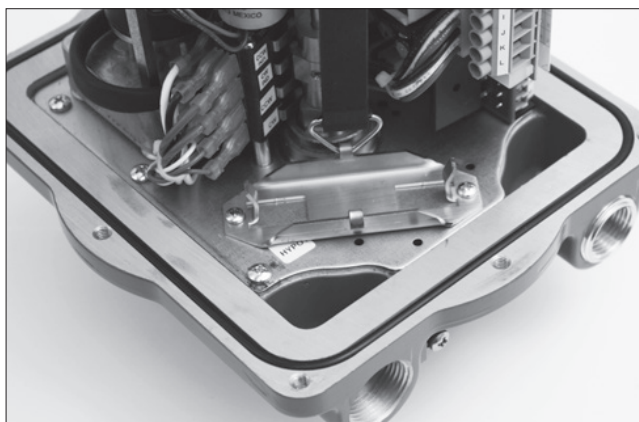


Figure 5.

Attach one side of the battery strap to the inner "hook" on the bracket.



Figure 6.

Check battery connector on board to verify 2-pin, or 3-pin; add adapter cable for 3-pin connector.



Figure 7.

Connect battery harness to the Universal control board, as shown. (Note the connector is "keyed" and can only be inserted one way)

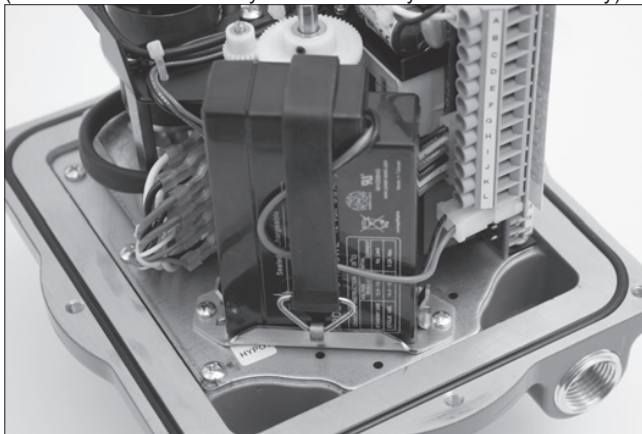


Figure 8.

Install the battery. Capture the excess battery harness underneath the battery strap and secure the strap to the outer 'hook' on the bracket, as shown.

The actuator is now ready to be re-calibrated and set up for your application. Please refer to product IMO for calibration and set up procedures.

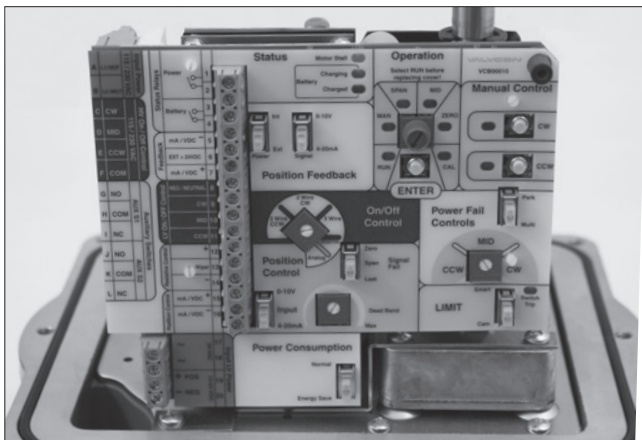


Figure 9.

Once the actuator is calibrated and set for the application you need to re-install the cover. Locate and remove the override shaft from the cover, and install it on the square shaft of the motor (if actuator is equipped with a handwheel override, place the bottom half of the two-piece shaft on the motor, and then the top half onto the bottom half before installing cover).

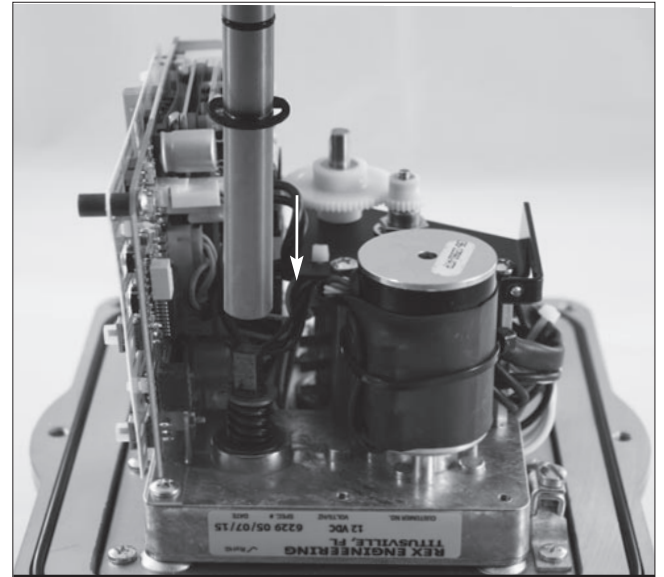


Figure 10.

Use the shaft to guide the cover onto the base and secure it with the screws that were previously loosened. Take care to ensure o-ring remains in groove and that it and any wires are not pinched when securing cover.



Figure 11.

Affix the "Battery Warning" labels to the cover at opposite corners, as shown.

2.2 LADC-SERIES PARTS VERIFICATION



Figure 12.

Table 3 - VCK00011 LADC (1000-3000)			
Item #	Parts #	Description	QTY
1	VC001032	Screw, #6-32x3/8", Phillips, Self-tapping	2
2	VC001035	Label, "Battery Warning"	2
3	VC002509	Battery, LADC	1
4	VCM00004	Battery Harness, LADC, 2-Pin	1
5	VCM00038	Battery Hold-Down Strap	1
6	VCM00039	Bracket, Battery Holder	1
7	VCA00018	Battery Harness, 3-Pin	1

LADC-SERIES INSTALLATION

1. Locate the replacement VCK00011 upgrade kit for LADC (if installing VCK00010 for ADC, refer to ADC section of this manual).
2. Verify parts received to the parts list and photo above.
3. Inspect all parts and hardware to be certain that they are free of damage that may have occurred in shipping.
4. Collect the tools required, refer to the **Table 2**.

Step by step instructions for the addition of a battery to a Universal LADC-Series actuator:

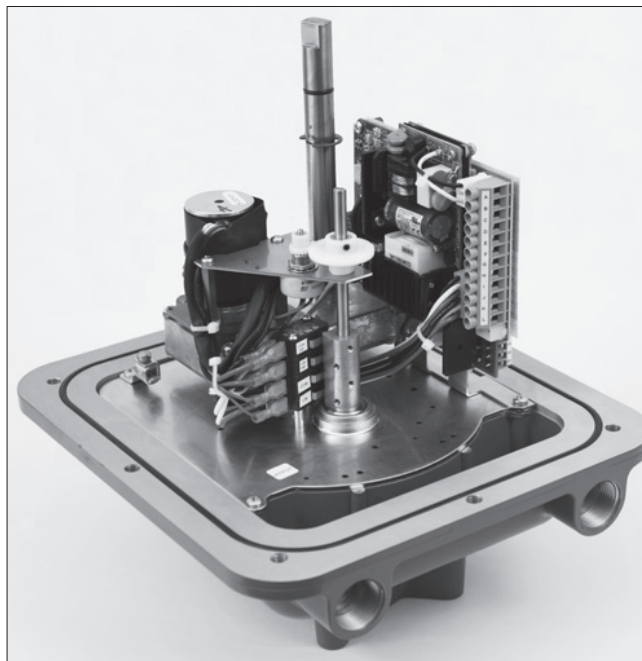


Figure 13.

Remove the actuator cover, using a 6 mm hex wrench to loosen the cover screws (note that the cover retains the screws; they do not need to be completely removed from the cover). The actuator will resemble **Figure 13** above.

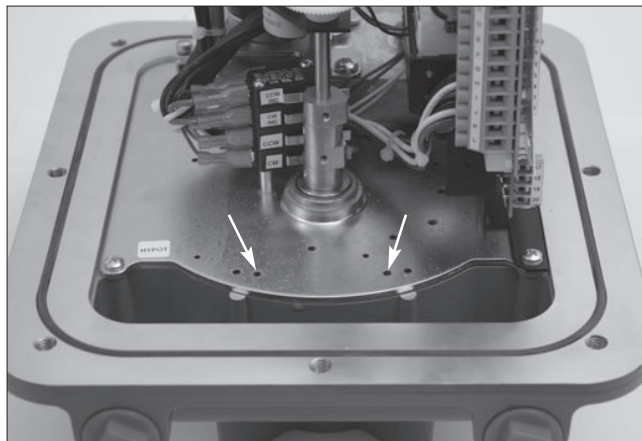


Figure 14.

Locate the bracket mounting holes on the motor support plate (see **Figure 14**).

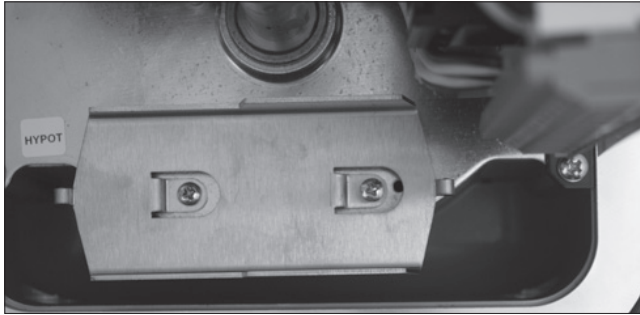


Figure 15.

Using the supplied 6-32x3/8" screws, install the bracket for the LADC as shown. Bracket must be mounted as shown in **Figure 15** above.



Figure 16.

Locate the supplied battery and harnesses. Verify the 2- Pin or 3-Pin connector on board and use appropriate harness. Connect the Red wire to the Red battery terminal and the Black wire to the Black battery terminal.



Figure 17.

Connect battery harness to the Universal control board, as shown. (Note the connector is "keyed" and can only be inserted one way)

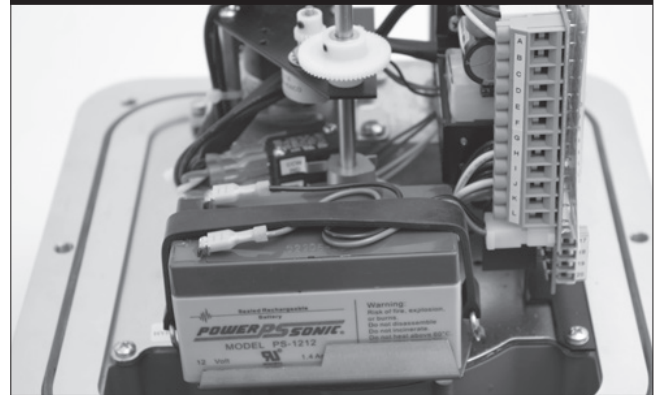
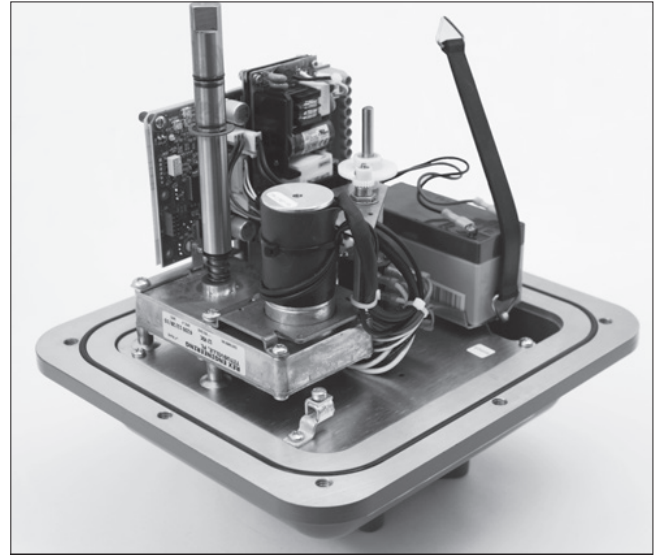


Figure 18.

Install the battery. Secure one side of the battery strap to the bracket, capture the excess harness underneath the strap, and then secure the strap to the other side of the bracket, as shown.

WARNING

INSTALL THE BATTERY EXACTLY AS SHOWN WITH THE STRAP ON THE TERMINAL SIDE OF THE BATTERY FIRST TO PREVENT THE POTENTIAL FOR THE BATTERY STRAP "LOOP" TO SHORT ACROSS THE BATTERY TERMINALS.

The actuator is now ready to be re-calibrated and set up for your application. Please refer to product IMO for calibration and set up procedures.

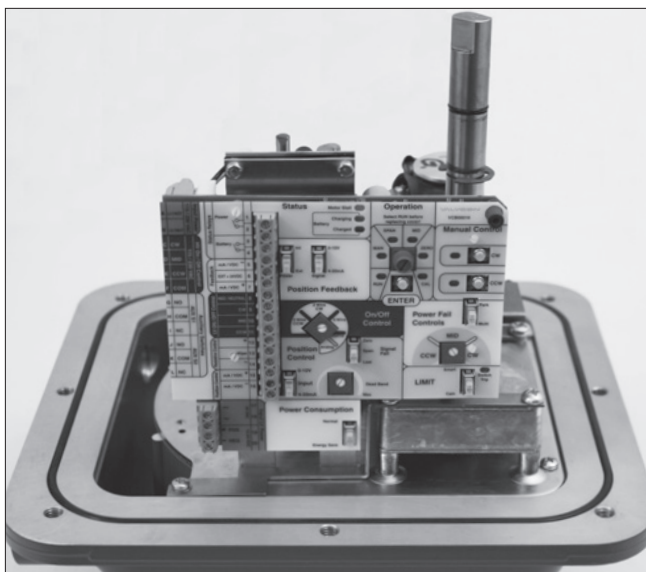


Figure 19.

Once the actuator is calibrated and set for the application you need to re-install the cover. Locate and remove the override shaft from the cover, and install it on the square shaft of the motor (if actuator is equipped with a handwheel override, place the bottom half of the two-piece shaft on the motor, and then the top half onto the bottom half before installing cover).

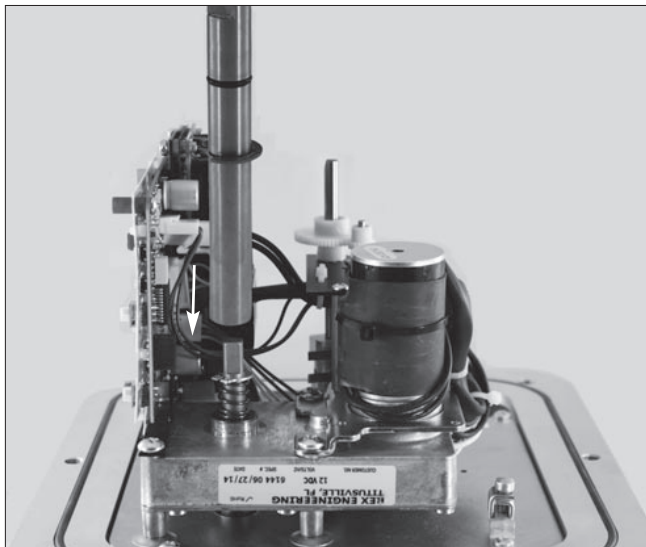


Figure 20.



Figure 21.

Use the shaft to guide the cover onto the base and secure it with the screws that were previously loosened. Take care to ensure o-ring remains in groove and that it and any wires are not pinched when securing cover.



Figure 22.

Affix the "Battery Warning" labels to the cover at opposite corners, as shown

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